TRAUMATIC LESIONS OF THE SPINE, OCCASIONED BY RAILROAD AND OTHER INJURIES: THEIR ETIOLOGY, PATHOLOGY AND TREATMENT.[1]

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THE essayist on this subject, dealt with the subject from a surgical standpoint exclusively, and, among other things, spoke with special emphasis on those lesions occurring in the various regions of the spine which may induce crippling effects, *without* any association or implication of the elements of the cord; noteworthy among which are those neuroses arising from injury of the peripheral nerves, the vascular ligamentous, osseous, synovial, or tendinous structures.

A most careful survey was made of the anatomical architecture, the physics of spinal movement, and the complex and intricate physiology of function was most minutely analyzed and exhaustively considered.

Dr. Manley, at the very outset, took the ground that as an etiological factor, in spinal injuries, a railroad accident possessed nothing peculiar or characteristic; that there was nothing from a psychological or physical standpoint, ing *to support* the assumption that there was, or ever can be, *anything*, entitled to the designation of "railroad spine." He maintained, that in the cases cited by Erichsen, in defence of his theory, there was not a scintilla of proof that the railroad accident was in any way responsible for the neuroses which he set down as being dependent on it. He maintained that the clinical histories alone very strongly indicated this. In the first place, because it appears that his female patients were hysterical, and the men were of a neurotic tendency. Besides, it is a well-known fact that serious organic lesions of the medulla spinalis are almost invariably either incurable or fatal. So many of Erichsen's patients recovered, that no opportunity was offered to demonstrate pathological changes by autopsies.

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On the other hand, Dr. Manley said, that his experience in dealing surgically with traumatic lesions led him to accept unqualifiedly the dictum of Dr. B. A. Watson, of New Jersey, viz., that "in serious injuries of the spine, the local and constitutional symptoms resulting were always in direct proportion to the extent of spinal lesion and pathological changes existing after the accident."

In discussing the pathological mutations observed after a severe injury to the cord, followed by hemorrhage, congestion or inflammation, Dr. Manley said, there was almost invariably associated with spinal injury very severe pain in the back; the tissues overlying the vertebræ being thickened, indurated and œdematous. This was easy to explain, when the vagaries and peculiarities of the rachidian circulation were borne in mind; and, besides, it aided in elucidating the *modus operandi* of secondary spinal infection, wherein the first brunt of the injury is borne by the soft parts; but later, meningeal trouble arises from infection, being propagated through the lymphatics or centripetal vessels inward.

In considering the question of spinal hemorrhage, he said a wrong impression commonly obtained in connection with the pathology of this subject; first, with respect to the source of the hemorrhage; and, secondly, its situation.

It had been said that the effused blood was arterial, and that it was always intra-meningeal. The speaker said, as a matter of fact he had always found the blood venous and coming from the meningo-rachidian veins. Its situation when in sufficient quantities to compress the cord was always external to the dura, but within the theca. Next to direct bone pressure, he had found spinal hemorrhage the most prolific cause of meningitis, through long-continued pressure and irritation.

Numerous cases were cited, from the author's own practice, illustrating the various phases of injuries to the spine resulting from railroad collisions: blows, twists and falls on the spine; of the latter, in a few in which the patient fell, the brunt or the momentum, being borne by the nates, and others, in which force, primarily, was borne by the head, neck or shoulders.

The main drift of the article, however, was evidently directed toward calling attention to those lesions arising primarily or secondarily from injuries to the back of an extrinsic origin, those designated according to the structure involved and the grade or variety of pathological process present, such as myopathies, neuropathies, trophic and amyotrophic changes, cellulitis, ostitis, periostitis, synovitis, arthritis, ulceration or suppuration.

Myelitis as a primary disease following spinal injury was denied.

The writer maintained, that it was only after the circulation was impeded by inflammatory changes and that the nutrition of the cord was seriously compromised, that its nerve-cylinders and cellular elements underwent degenerative changes and softening.

Spinal anæmia, as a sequence of spinal injury, likewise was denied with emphasis.

It was claimed that this disease had no pathological foundation whatever; that there was no proof of the existence of a local diminution of the quantity of blood in the spinal cord, when other organs were amply supplied, but that, as in cerebral anæmia, it could occur only as a permanent condition when there was constitutional anæmia; either by the local abstraction of blood or its general impoverishment, by influences acting on the general economy; the treatment of it by ferruginous and restorative preparations thereby indicating its real nature, so that, instead of being a primary, local malady, it was simply the index of reduced health.

In approaching the subject of diagnosis, Dr. Manley strongly insisted on the importance of proceeding with great circumspection; inquiring cautiously into the patient's general history and being on the alert for any trace of syphilis, particularly if the patient were young and the interval of time was considerable from the date of injury and the onset of symptoms.

Physics, independent of electricity, affords little positive aid in the diagnosis of spinal disease, as in many of the worst cases there is no deformity, distortion, fullness or atrophy, while not infrequently we will see the most marked displacement of the bony structures without any marked impairment of function in the cord.

We have not space to give at length more than an outline of this very valuable brochure of spinal traumatisms, which we are certain will be read with profit by any one required to practice railroad surgery or treat mechanical lesions of the spine.

INFLUENZA AND APHASIA.

In the "Edinburgh Medical Journal," August, 1890, Thos. Dobson Poole reports a case of aphasia during an attack of grippe. The patient was seized with shivering, giddiness, violent headache; complained feeling queer; was given brandy, and put to bed. The next day could not speak, but when asked how she felt, pointed to her head. Later in the day could say "yes." Temperature 102.2°. Next day seemed to understand all that was going on. Temperature 100°. She continued to improve, and in a few days she could say the names of all her children except one, to whom she pointed in giving a wrong name. The headache lasted some time, even after the patient was able to go down stairs. What was the tangible condition of the speech centres it is difficult to say. It would appear that in some aphasic states, when the power of saying names or nouns is returning, patients are able to speak the names and nouns they have learned most recently, as in the case of this woman, who failed to call her nurse and sisters by their right names, but spoke those of her children correctly. L. F. B.